

**CLAIMS**

What is claimed is:

1. A medical device, comprising  
a hollow housing;  
a needle having a sharpened tip operable between an extended position extending forwardly from the housing and a retracted position in which the sharpened tip of the needle is enclosed within the housing;  
a catheter mounted on the needle;  
a biasing element biasing the needle toward the retracted position; and  
a needle retainer fixedly connected with the insertion needle and releasably retaining the insertion needle in the extended position, comprising an elongated arm engaging the catheter; wherein the needle retainer releases the needle upon disengagement of the catheter from the arm allowing the biasing element to propel the needle rearward.
2. The medical device of claim 1 comprising a lock for locking the needle in the retracted position.
3. The medical device of claim 1 wherein the elongated arm comprises a latch releasably engaging the housing.
4. The medical device of claim 1 comprising a flashback chamber integrally formed with the needle retainer.
5. The medical device of claim 1 wherein the needle retainer is constrained to pivotable motion prior to retraction of the needle.

6. A medical device comprising:
  - a hollow housing;
  - a needle having a sharpened tip operable between an extended position extending forwardly from the housing and a retracted position in which the sharpened tip is enclosed within the housing;
  - a catheter mounted on the needle;
  - a biasing element biasing the needle rearwardly into the retracted position;
  - a needle retainer operable between a latched position and an unlatched position, wherein in the latched position the needle retainer retains the needle in the extended position against the bias of the biasing element;
  - an exposed surface manually operable to retain the needle retainer in the latched position.
7. The medical device of claim 6 wherein the catheter has an internal surface and an external surface, and a forward portion of the needle retainer engages the catheter external surface.
8. The medical device of claim 6 comprising a fluid chamber in fluid communication with the needle.
9. The medical device of claim 6 wherein the needle retainer is releasably connected to the housing.
10. The medical device of claim 6 wherein a rearward portion of the needle retainer is spaced rearwardly from the catheter.
11. The medical device of claim 6 wherein the catheter is operable between a mounted position in which the catheter is mounted on the

housing, and a removed position in which the catheter is removed from the housing, wherein the device comprises an indicator associated with the catheter operable to provide an indication signal when the catheter is displaced into a position intermediate the mounted position and the removed position.

12. The medical device of claim 6 wherein the indication signal is audible or tactile.
13. The medical device of claim 11 wherein the indication signal is visual.
14. A method for inserting an IV catheter, comprising the steps of:  
providing a catheter insertion device having a housing, a catheter hub removably mounted on the housing, a needle, and a needle retainer for releasably retaining the needle so that the needle projects forwardly from the housing;  
disengaging the engagement of the catheter with the housing;  
selectively manually engaging the needle retainer to impede retraction of the needle;  
releasing the selective manual engagement with the needle retainer to disengage the needle retainer and the needle;  
retracting the needle into the housing.
15. A medical device, comprising:  
a catheter insertion device, comprising:  
a hollow housing;  
a needle having a sharpened tip operable between an extended position extending forwardly from the housing and a retracted position in which the sharpened tip of the needle is enclosed within the housing;  
a spring biasing the needle toward the retracted position; and

a needle retainer fixedly connected with the insertion needle  
and releasably retaining the insertion needle in the  
extended position, comprising an elongated arm  
engaging the catheter; and  
a catheter mounted on the catheter insertion device;  
wherein upon removal of the catheter from the catheter insertion  
device the needle is released for retraction allowing the spring  
to propel the needle rearward.

16. The medical device of claim 15 comprising a lock for locking the needle in the retracted position.
17. The medical device of claim 15 wherein the elongated arm comprises a latch releasably engaging the housing.
18. The medical device of claim 15 comprising a flashback chamber integrally formed with the needle retainer.
19. The medical device of claim 15 wherein the needle retainer is constrained to pivotable motion prior to retraction of the needle.